**The Hashemite University-College of Engineering**

**Department of Industrial Engineering**

**Manufacturing Processes I-Winter 2013**

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**Instructor:** Dr. M. Ajarrah

**Office Hours:** Monday 2:00-4:00 pm and Tuesday 1:00-3:00 pm

**Text Books:**

1. *Fundamentals of Modern Manufacturing, Materials, Processes and Systems, M.P. Groover, 3th Edition*, J. Wiley & Sons, INC., 2007.
2. *Manufacturing Processes for Engineering Materials, S. Kalpakjian and S. R. Schmid, 5th Edition, Prentice Hall, 2008.*

**LECTURES**

You are strongly advised to attend all lectures and to go through the upcoming material before coming to class.

**SYLLABUS**

* Introduction and Overview of Manufacturing Processes
* Review of Mechanical Properties
* Overview of Casting Processes
* Fundamental of Metal Forming
* Strain Rate Sensitivity
* Bulk Deformation Processes in Metalworking (Forging, Rolling, Extrusion and Drawing)
* Sheet Metal Forming Processes ( Cutting, Bending, Drawing, Stretch Forming and High Energy Rate Forming)
* Formability of Sheet Metals
* Introduction to Polymers
* Shaping Processes of Polymers

**Evaluation:**

First Exam 25 %

Second Exam 25 %

Final Exam 50 %